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REMARKS

Certain claims were rejected under 35 U.S.C. 102(b) as being anticipated and other claims were rejected under 35 U.S.C. 103(a) as being obvious. Claims 1-20 are pending. Applicant respectfully traverses the rejections and requests a withdrawal of all rejections for reasons set forth below.

Claims 1-5, 7, 9-15, 17 and 19 stand rejected under 35 USC 102(b) as being anticipated by Bornzin et al. (US 5,549,650, hereinafter "Bornzin"). Applicants respectfully assert that Bornzin fails to teach, among other things, determining whether a therapy was delivered for a predetermined portion of a time period. As such, the rejection is improper and should be withdrawn.

Bornzin teaches measuring the cardiac performance based on the present values of AV and HR for 512 beats (col 20, lines 58-60). The Examiner has interpreted the first and next time period as 512 beats times the number of AV "bins". However, Bornzin does not teach determining whether pacing pulses (therapy) are actually delivered at the present values of AV and HR during the 512 beats. Delivery of pacing pulses at the present values of AV and HR will occur only when the intrinsic heart rate is less than the rate corresponding to the present values of HR and AV interval. For example, when HR is set equal to HRmin (step 860), pacing will occur only when the intrinsic heart rate is below HRmin. The Examiner states that during step 862, a counter is counting the beats. However, counting the number of beats is not determining whether the beats are intrinsic or paced beats. Since Bornzin makes no suggestion, express or implied, for determining whether the 512 beats are intrinsic beats or are actually paced beats corresponding to the present values of HR and AV, Bornzin does not teach or suggest determining whether pacing pulses (therapy) are delivered for a predetermined portion of the 512 beats. For at least this reason, the rejection should be withdrawn.

Furthermore, the Applicants assert that it would not have been obvious to one having skill in the art to combine the references in the manner suggested by the Examiner. As shown in Figure 6, the Applicant has recognized that

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maintaining a permanent lower pacing rate at a determined optimal lower rate can minimize the incidence of premature atrial contractions. In the example, a heart rate of approximately 83 bpm was found as the optimal lower rate, resulting in the fewest premature atrial contractions. Setting the permanent lower rate at a determined optimal lower rate based on an arrhythmia metric differs from overdrive pacing therapies which, after a period of time, involve stepping back down to a nominal lower pacing rate. As stated in paragraph 3, the Applicants have recognized that stepping back down to a nominal lower rate results in a return of arrhythmias, which the present invention is intended to avoid.

There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.

Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned attorney to attend to these matters.

Respectfully submitted,

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Date



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